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**PATENT**

**CERTIFICATE OF MAILING**

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David R. Plautz

Date of Signature: March 30, 2001.

, Reg. No. 28,251.

1c997 U.S. PTO  
09/823013  
03/30/01

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants : Euan ARMSTRONG, *et al.*  
Serial No. : 09/\_\_\_\_\_ (Rule 53(b)(1) continuation of 09/260,855)  
Filed : Concurrently herewith  
For : **CHOCOLATE CRUMB**  
Group Art Unit : 1761 (Anticipated)  
Examiner : Carolyn Paden (Anticipated)

**INFORMATION DISCLOSURE STATEMENT AND FORM PTO - 1449**

Box Patent Application  
Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

The documents listed below are identified also in the accompanying Form PTO-1449, and copies of the documents are submitted herewith.

In view of this Information Disclosure Statement being submitted concurrently with the filing of this continuation application, it is not believed that this submission occasions any fees. 37 CFR 1.97 (b) (1). However, should there be any fee, please charge the same to Deposit Account No. 22-0480.

The documents are:

- 1) Siukola, *et al.*, U.S. Pat. No. 5, 962, 063 (10/5/99) (effective 1995);
- 2) Dubberke, U.S. Pat. No. 5, 932, 277 (1999) (effective 3/12/98);
- 3) Miller, U.S. Pat. No. 5, 626, 900 (1997);
- 4) Martin, *et al.*, U.S. Pat. No. 5, 080, 923 (1992);
- 5) Keme, *et al.*, U.S. Pat. No. 4, 980, 189 (1990);
- 6) Turos, U.S. Pat. No. 4, 346, 121 (1982);
- 7) Minifie, *et al.*, U.S. Pat. No. 4, 086, 371 (1978) ("Minifie '371 Patent" below);
- 8) Bracco, U.S. Pat. No. 4, 081, 568 (1978);
- 9) Rusoff, U.S. Pat. No. 3, 622, 342 (1971);
- 10) Verheij, European Patent Application Publication No. 0 248 462 A1 (1987);
- 11) Lipp, German Patent Application Publication No. DE 35 02 446 A1 (1986);
- 12) Chevally, *et al.*, Great Britain Complete Patent Specification No. 1 537 377 (1978);
- 13) Burley, Great Britain Complete Patent Specification No. 1 425 839 (1976);
- 14) Glynn, Great Britain Complete Patent Specification No. 1 364 500 (1974);

15) Rostagno, Great Britain Complete Patent Specification No. 1, 196, 380 (1970);

16) Beckett, Editor, **INDUSTRIAL CHOCOLATE MANUFACTURE AND USE**, Second Edition, 1994, BLACKIE ACADEMIC & PROFESSIONAL, London, U.K., pp. 43, 50 - 54 and 258 - 263;

17) Minifie, **CHOCOLATE, COCOA AND CONFECTIONERY; SCIENCE AND TECHNOLOGY**, Third Edition, 1989, Chapman and Hall, N.Y., N.Y., U.S.A., pp. 135 - 136, 144 - 148 and 164 ("Minifie text" below); and

18) Desrosier, ELEMENTS OF FOOD TECHNOLOGY, Avi Publishing Company, Inc., Westport CT, 1977, p. 4343.

19) Database Abstract, Derwent Information, Ltd., WPI Accession No. 86-205333/198632, XRAM Accession No. C86-088252, abstract of Lipp, German Patent Application Publication No. DE 35 02 446.

This Information Disclosure Statement makes of record, irrespective of materiality, art officially of record and otherwise also in the record of Application Serial No. 09/260,855, the parent application of this divisional application.

Rusoff, Lipp, Chevally and Burley, as will be noted, are referred to in the as-filed specification at numbered pages 3 - 4 and see the Substitute Specification "MARKED-UP" Version filed concurrently herewith at pages 3 - 4. Because of that, no further reference to those documents is set forth herein, and in that regard, see MPEP §609 A(3). Further, since Lipp is not in the English language, the Examiner's attention also is directed to the Derwent Abstract supplied, and should the Examiner desire a partial or full translation of Lipp, such will be obtained and submitted upon request.

Dubberke, cited by the Examiner in the parent application, is not referred to further herein since that document is not statutory prior art to the parent application or to this application.

Siukola discloses preparation of a crumb with a sugar substitute sugar alcohol “bulk sweetener” to provide for preparation of dietetic chocolate products wherein the ingredients are stirred into a homogeneous mass, and then the mass is kneaded and heated simultaneously, and after attaining a desired temperature controlled so that all of the bulk sweetener is not dissolved and/or melted, the kneaded heat-treated mass is dried under vacuum conditions. (See, for example, col. 3, lns. 16 - 67). Additionally, as for ingredient amounts, see column 4, lines 34 - 41 and the Table at column 5.

Miller discloses that crumb products for preparing chocolate may be prepared without a heating step for caramelizing sugar (i.e., without heating to effect a Maillard reaction) by reason of combining molasses with milk solids and “at least some sugar”. (See, for example, col. 4, lns. 28 - 49; and col. 6, lns. 12 - 26 and see also the abstract). As for the processing steps and ingredient amounts, see, for example, column 6, line 25, to column 7, line 33, and see also the prior art disclosure of a “typical milk crumb composition” and processing at column 3, line 14, to column 4, line 2.

Martin discloses preparation of a composition wherein a crystalline saccharide, such as sucrose, is dispersed in a fat, and wherein the composition does not contain milk solids or chocolate liquor, by a process which involves roll-refining and drying steps and which is disclosed as being useful for making chocolate products. (See, for example, col. 3, ln. 49, to col. 4, ln. 61, and also Example 1 at col. 6).

Keme, like Siukola, discloses preparation of a crumb product with a sugar substitute to provide for preparation of dietetic chocolate products wherein a sugar substitute is combined with a liquid or solid milk product, the mix is heated, chocolate liquor is added

to the heated mix and then that heated mix is dried under vacuum conditions. (See, for example, col. 3, lns. 15 - 32; and col. 3, ln. 48, to col. 4, ln. 3; and see Example 1 at cols. 4 - 5).

Turos discloses a process for manufacturing a chocolate crumb product wherein a slurry of a milk raw material, sugar and protein material, and optionally amino acids, and having a moisture content of from 15% to 60% (40% to 85% dry solids) (col. 7, lns. 13 - 18) is subjected to heat to effect a Maillard reaction, fat is added to and processed with the heat-treated Maillard reaction product so that an emulsion is obtained which has a solids content of from 40% to 85% by weight (col. 7, lns. 36 - 47), and then the emulsion may be used as is or be dried to a moisture content of from 1.5% to 6% by weight (col. 5, lns. 5 - 8 and 59 - 64) (see also, for example, col. 1, lns. 24 - 39; col. 1, ln. 51, to col. 2, ln. 17; col. 2, lns. 39 - 45; col. 3, lns. 13 - 37; col. 4, ln. 5, to col. 5, ln. 9; col. 5, lns. 38 - 64; and col. 7, lns. 13 - 60).

Minifie '371 Patent discloses a process for preparing a crumb for preparation of a chocolate composition wherein a "feedstock" comprising sugar and milk solids and "a substantial amount of moisture (e.g., 28 - 30% by weight)" is heated at a temperature which, as disclosed, "should be within the range of about 160°C ... and about 176.67°C" to obtain a condensed mixture having a moisture content of from about 4% to 6% by weight, and that condensed mixture is passed to and through a crystallizer having mixing elements, i.e., a scraped surface crystallizer, so that the condensed mixture is kneaded and cooled to obtain particulate material, and if the crystallized product obtained is to be stored, it may be dried to a moisture content of about 1%. (See, for example, col. 1, lns. 8 - 65; col. 2, lns. 54 - 68; col. 6, lns. 2 - 27; and col. 6, ln. 45, to col. 7, ln. 13; quotes at, respectively, col. 1, lns. 38 - 39, and col. 6, lns. 19 - 21). (See also the Minifie text at p. 146 and Beckett at p. 53).

Bracco discloses preparation of a composition for preparation of a chocolate product which has a lipolyzed character where the pH of a mixture of milk and sugar is adjusted to a pH of from 6.25 to 6.7 and then, the pH-adjusted mixture is dried and subsequently processed into a milk chocolate product. (See, for example, col. 1, lns. 6 -9 and 34 - 51; and col. 2, lns. 9 - 44).

Rusoff disclosed preparation of crumb products for preparing chocolate products by dry mixing ingredients and passing the mixture through an extruder which heats the ingredients and during the passing and heating, water is introduced into the ingredients in the extruder. (See, for example, col. 1, ln. 44, to col. 2, ln. 69).

Verheij discloses preparation of products for preparing chocolate products by mixing milk and sugar, and optionally cocoa mass, removing water from the mix to concentrate the ingredients and then kneading and drying the concentrate under vacuum conditions to obtain a dried product. (See, for example, p. 1, lns. 8 - 19; p. 2, ln. 26, to p. 3, ln. 6, p. 3, lns. 16 - 22; and p. 4, lns. 18 - 25).

Glynn discloses preparation of a product for preparing a milk chocolate, wherein milk powder, “preferably” in combination with sugar and “preferably” in the presence of water in an amount of up to and including 10%, is heated to a temperature of not less than 85°C, and “advantageously” not greater than 140°C, such as in a bed in a tray in a hot air oven for a time of up to 4 hours. (See, for example, p. 1, ln. 44, to p. 2, ln. 18).

Rostagno discloses preparation of a product for preparing a white chocolate wherein a mixture of milk solids and sugar and also water in an amount sufficient, such as an amount of from 8% to 15% by weight of the milk solids and sugar mixture for, upon heating, allowing Maillard reaction caramelization, is heated to a temperature in a range of from 80°C to 105°C for from 10 minutes to 60 minutes, the heating is discontinued and then, the heat-treated product is dried under reduced pressure. (See, for example, p. 1, lns. 32 - 60; and p. 1, ln. 70, to p. 2, ln. 11).

Beckett, at pages 51 - 53 and 262 - 263, and the Minifie text, at pages 145 - 148, summarize processes employed for making crumb for chocolate production, and each includes disclosure of an atmospheric pressure process which involves two-stage heating and use of a scraped surface heat exchanger for the second heating stage. (Beckett at p. 53) (Minifie at pp. 146 - 147).

In accordance with MPEP §609 and with 37 CFR 1.97 (g) and (h), this Information Disclosure Statement is not to be construed as representation by undersigned counsel that no better art exists or that a search has been made. Nor should such be construed as an admission that the information contained in the documents referred to herein is analogous to the claimed subject matter or that the information contained in the documents, whether the documents are taken individually or in any combination, is or is considered to be material to patentability of any claimed subject matter.

Respectfully Submitted,

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Form PTO-1449

**INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION**

(Use several sheets)

Docket Number (Optional)

Application Number

09/ (cont. of 09/260,855)

Applicant

Euan ARMSTRONG, *et al.*

Filing Date

Concurrently herewith

Group Art Number

1761 (Anticipated)

997 U.S. PTO

09/823013

03/30/01

**U.S. PATENT DOCUMENTS**

EXAMINER INITIALS	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5 9 6 2 0 6 3	10-1999	SIUKOLA, <i>et al.</i>	426	631	11-1995
	5 9 3 2 2 7 7	8-1999	DUBBERKE	426	631	3-12-1998
	5 6 2 6 9 0 0	5-1997	MILLER	426	580	
	5 0 8 0 9 2 3	1-1992	MARTIN, <i>et al.</i>	426	658	
	4 9 8 0 1 8 9	12-1990	Keme, <i>et al.</i>	426	548	
	4 3 4 6 1 2 1	8-1982	TUROS	426	580	
	4 0 8 6 3 7 1	4-1978	MINIFIE, <i>et al.</i>	426	658	
	4 0 8 1 5 6 8	3-1978	BRACCO	426	584	
	3 6 2 2 3 4 2	11-1971	RUSOFF	99	23	

**FOREIGN PATENT DOCUMENTS**

EXAMINER INITIALS	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	0 2 4 8 4 6 2	9-1987	EUROPEAN	A23G	1/00		X
	3 5 0 2 4 4 6	7-1986	Fed. Rep. GERMANY	A23G	1/00		X
	1 5 3 7 3 7 7	12-1978	UNITED KINGDOM	A23G	1/00		X
	1 4 2 5 8 3 9	2-1976	UNITED KINGDOM	A23G	1/00		X
	1 3 6 4 5 0 0	8-1974	UNITED KINGDOM	A23G	1/00		X

**OTHER DOCUMENTS**

	Beckett, Editor, <b>INDUSTRIAL CHOCOLATE MANUFACTURE AND USE</b> , Second Edition, 1994, BLACKIE ACADEMIC & PROFESSIONAL, London, U.K., pp. 43, 50 - 54 and 258 - 263
	Minifie, <b>CHOCOLATE, COCOA AND CONFECTIONERY; SCIENCE AND TECHNOLOGY</b> , Third Edition, 1989 Chapman and Hall, N.Y., N.Y., U.S.A., pp. 135 - 136, 144- 148 and 164
	Derosier, <b>ELEMENTS OF FOOD TECHNOLOGY</b> , Avi Publishing Company, Inc., Westport, CT, 1977, p. 434

EXAMINER

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP §609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.



## INFORMATION DISCLOSURE CITATION IN AN APPLICATION

09/ (cont. of 09/260,855)

1761 (Anticipated)

[illegible][illegible]

		Database Abstract, Derwent Information, Ltd., WPI Accession no. 86-205333/198632, XRAM Accession No. C86-088252, abstract of Lipp, German Patent Application Publication No. DE 35 02 446.

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